

In re Patent Application of:
AVRON I. BRYAN, et al
Serial No. 10/752,214
Filing Date: 1/6/2004

/

In the Claims:

1. (Previously Presented) A fluid transfer system useful for transferring hazardous fluids within a closed environment, the system comprising:
 - fluid storage means for storing a fluid within a closed environment;
 - first flow control means operable with the fluid storage means for delivering a fluid from a source location thereto while maintaining the fluid within the closed environment;
 - sensing means for sensing an amount of fluid carried by the fluid storage means, wherein the sensing means comprises a pressure sensor operable for sensing pressure responsive to the fluid received by the fluid storage means;
 - second flow control means operable with the fluid storage means for delivering the fluid therein to a target location while maintaining the fluid within the closed environment;
 - a vapor line in fluid communication between the target location and the source location for transferring vapor from the target location to the source location within the closed environment and responsive to the target location receiving the fluid; and
 - processing means operable with the first and second flow control means for controlling fluid flows therewith in response to an amount of fluid sensed by the sensing means.
2. (Previously Presented) A system according to claim 1, wherein the sensing means comprises a load cell operable with the fluid storage means for determining an amount of the fluid carried therein.

Claims 3 and 4 (cancelled)

In re Patent Application of:
AVRON I. BRYAN, et al
Serial No. 10/752,214
Filing Date: 1/6/2004

5. (Currently Amended) A fluid materials transfer system for transferring a hazardous fluid from a source to a target while maintaining the hazardous fluid within a closed environment in order to provide maximum personal protection to an operator during a transfer operation, the system comprising:

- a source of hazardous fluid;
- a target for receiving the hazardous fluid;
- a conduit connected between the source and the target for maintaining the hazard fluid within a closed environment;
- a pump operable for transferring the hazardous fluid from the source to the target;
- a sensor in fluid communication with the conduit for sensing an amount of fluid transferred from the source to the target, wherein the sensor is operable for sensing a pressure at the target; and
- a controller responsive to the sensor for controlling the amount of fluid transferred to the target while maintaining the fluid within the closed environment, wherein the hazardous fluid comprises vapor being transferred from the target to the source within the closed environment, and wherein the controller stops the vapor from being transferred in response to a pressure limit at the target detected by the sensor.

6. (Previously Presented) A system according to claim 5, wherein the hazardous fluid comprises a carcinogenic hydrocarbon useful in at least one of a pesticide, fumigant, and nematocide.

7. (Previously Presented) A system according to claim 5, wherein the sensor is operable for sensing an amount of hazardous fluid transferred from the source.

Claim 8 and 9 (cancelled)

10. (Previously Presented) A fluid transfer system comprising:
a first source of a first fluid;
a second source of a second fluid;
a target for receiving the first and second fluids;
a first conduit connected between the first source and the target for maintaining the first fluid within a closed environment;

a first pump operable for transferring the first fluid from the first source to the target;
a first sensor in fluid communication with the first conduit for sensing an amount of the first fluid transferred from the first source to the target;
a second conduit connected between the second source and the target;
a second pump operable for transferring the second fluid from the second source to the target; and
a second sensor in fluid communication with the second conduit for sensing an amount of the second fluid transferred from the second source to the target; and
a controller communicating with the first and second pumps and responsive to the first and second sensors for controlling the amount of fluid transferred to the target, wherein a pressure is sensed for determining an amount of both the first and second fluids being transferred.

11. (Previously Presented) A system according to claim 10, wherein the first conduit comprises a vapor transfer line and a liquid line, and wherein each of the vapor and liquid lines are connected at one end to the first source through a first micro-matic valve and at an opposing end to the target through a second micro-matic valve.

12. (Previously Presented) A system according to claim 10, further comprising a mixer connected to the first and second conduits at an entrance end and to the target at a exit end.

13. (Previously Presented) A system according to claim 12, wherein the controller is preset for providing a stop action to at least one of the first and second pumps, and thus the transferring of at least one of the first and second fluids for preset conditions selected from operational input requirements including at least one of flow rate, mixing ratio for mixing the first and second fluids, and total amount of the fluids to be transferred.

14. (Previously Presented) A system according to claim 10, wherein at least one of the first and second fluids is a hazardous fluid.

15. (Previously Presented) A system according to claim 10, further comprising:

- a first container in fluid connection between the first source and the target for receiving the first fluid therein;
- a first load cell operable with the first container for determining an amount of the first fluid carried therein;
- a second container in fluid connection between the second source and the target; and
- a second load cell operable with the second container for determining an amount of the second fluid carried therein,

wherein the sensor is operable with the first and second load cells for determining the amount of the first and second fluids contained therein.

16. (Currently Amended) A system for transferring a hazardous fluid from a source to a target while maintaining the hazardous fluid within a closed environment, the system comprising:

- a source of hazardous fluid;
- a target for receiving the hazardous fluid;

In re Patent Application of:
AVRON I. BRYAN, et al
Serial No. 10/752,214
Filing Date: 1/6/2004

/

at least one container in fluid communication with the source and the target for receiving the hazardous fluid therein prior to being pumped to the target;
a load cell operable with the at least one container for determining an amount of the hazardous fluid carried therein;
at least one pump for pumping the hazardous fluid from the source to the target;
a sensor operable for sensing pressure at the target;
fluid flow control means communicating with the sensor for controlling fluid flow from the source to the target responsive to the pressure at the target; and
a vapor line in fluid communication between the target and the source for transferring vapor from the target to the source within the closed environment responsive to the target receiving the hazardous fluid and increasing the pressure therefor.

Claim 17 (cancelled)

18. (Currently Amended) A system according to claim 17 16, wherein the at least one pump comprises:

 a first pump operable for pumping the hazardous fluid from the source to the container responsive to the amount of hazardous fluid carried therein; and

 a second pump operable for pumping the hazardous fluid from the container to the target responsive to the pressure at the target.

19. (Previously Presented) A system according to claim 18, wherein the at least one container comprises first and second containers operable with the second pumps for transferring the hazardous fluid therefrom.

Claim 20 (cancelled)

In re Patent Application of:

AVRON I. BRYAN, et al

Serial No. 10/752,214

Filing Date: 1/6/2004

21. (Currently Amended) A system transferring a hazardous fluid, the system comprising:

a source of hazardous fluid;

a target for receiving the hazardous fluid;

a conduit in fluid connection between the source and the target for maintaining the hazardous fluid within a closed environment;

a pump operable with the conduit for pumping the hazardous fluid from the source to the target;

a pressure sensor operable for sensing pressure at the target responsive to the hazardous fluid received thereby;

a controller responsive to the pressure sensor and communicating with the pump for controlling a pumping of the hazardous fluid to the target in response to the pressure at the target; and

a vapor line in fluid communication between the target and the source for transferring vapor from the target to the source within the closed environment responsive to the target receiving the hazardous fluid.